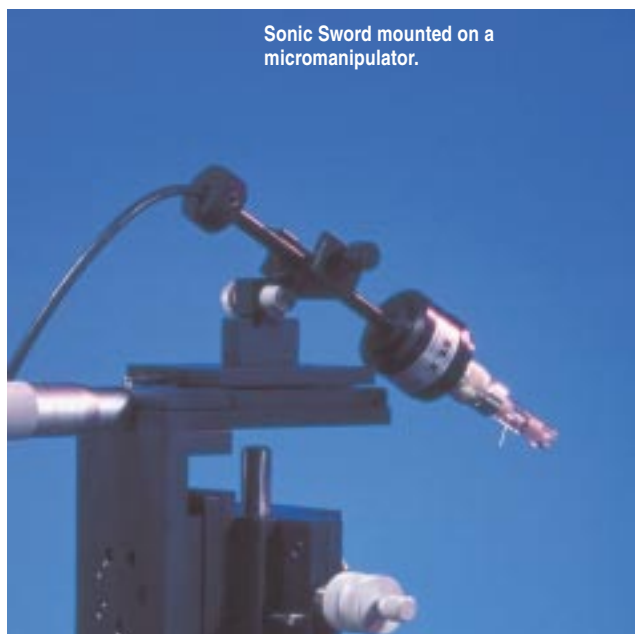


Microinjection and Microperfusion



Sonic Sword

The Sonic Sword functions by applying a high-acceleration thrust to the injection micropipette. This high velocity vastly eases penetration of the zona pellucida. This technique lessens the trauma normally caused in the penetration of the oocyte, avoiding cytoplasmic fragments.

- High speed zona penetration reduces cell trauma
- Unblocks micropipette tips
- Selectable penetration

The instrument also removes blockages in the micropipette caused by sperms and debris that have congregated in and around the tip opening of the injection micropipette. The blockages are removed by a vibratory action analogous with that of sonication.

The Sonic Sword has been found most useful for biopsy procedures, both polar body and blastomere biopsy. The single pulse penetration with controlled excursion permits breaching the zona pellucida by mechanical means, creating a small hole of specific size through which the cell or cells can be aspirated. This approach is a one step procedure, avoiding the use of enzyme and subsequent washing, and the limited tear has been proven not to compromise the subsequent viability of the embryo.

The instrument consists of two main parts; the actuator and its associated electronic controller. The actuator incorporates a micropipette holder to hold the micropipette and a mounting rod to attach the actuator to an axial drive toolholder/micromanipulator or other positioning device.

Controls are provided for adjusting the length and speed of the forward thrust of the micropipette and an independent adjustment to set the speed of the retraction. A front panel LED indicator allows the user to visually see whether the micropipette is in the forward or retracted position. The Sonic Sword is easily operated by a remote footswitch.

Adapters are available for mounting the Sonic Sword onto most commonly used positioning devices.

Specifications

Axial Excursion	0 to 60 microns
Forward Thrust	X to Y $\mu\text{m}/\text{sec}$ adjustable
Reverse Thrust	X to Y $\mu\text{m}/\text{sec}$ adjustable
Dimensions, H x W x D	8.3 x 14 x 20.3 cm (3.25 x 5.5 x 8 in)
Power	115/230 VAC to 50/60 Hz

Catalog No.

CGS 8206.75

Product

Sonic Sword